German Empire Patent No. 489,308

Translated from German by the Ralph McElroy Company, Custom Division
P.O. Box 4828, Austin, TX 78765 USA

Code: 490-18154

GERMAN EMPIRE

IMPERIAL PATENT OFFICE

PATENT NO. 489,308

| | |
|---|---|
| Class: | 30 d |
| Group: | 14 |
| Application No.: | W 77700 IX/30 d |
| Patented in the German Empire effective: | November 20, 1927 |
| Date of the public announcement of the granting of the patent: | December 24, 1929 |

# ABSORBENT PAD


| | |
|---|---|
| Applicant: | Harrison R. Williams, Glen Falls, Warren County New York |
| Priority: | |
| Priority Date: | November 20, 1926 |
| Country: | USA |


The invention pertains to pads or sanitary napkins consisting of an absorbent material, in particular female sanitary napkins and other sanitary or medical wound pads.

The main purpose of the invention is to create a pad which absorbs any fluid with its inner portion and prevents the fluid from causing soiling beyond the locally limited absorption surface, so that the remaining surface that is in contact with the body of the person wearing the pad remains dry, soft and clean. Chafing and other irritations of the skin as well as soiling of the clothing is effectively prevented.

One essential characteristic of the invention is an absorbent pad with a particularly absorbent central portion or layer that is able to attract and collect the largest portion of the absorbed fluid. The fluid absorption in this layer is thus essentially centralized and does not tend to wet the outer surfaces through the pad.

According to the invention a pad is utilized that consists of a main portion made from highly absorbent, easily dissolvable, matted cellular fibers and a central portion made from plant paste or powder, whereby the central portion has a greater ability to attract and absorb fluids than the aforementioned main portion, so that the absorbed liquids are collected within the pad.

According to the figures which illustrate the objective of the invention, the pad is formed by placing several layers of absorbent, easily dissolvable, matted cellular fibers on top of each other. One of these layers contains a particularly highly absorbent plant paste or powder on its inner surface within a certain distance from the lateral edges. If the layers are placed exactly on top of each other, this highly absorbent paste or powder forms a central portion that tends to absorb the fluid from the top, the bottom and the sides of the pad. The entire

outer surface of the thus assembled layers is subsequently treated with a material that repels fluids and thus prevents the return and absorption of the fluid towards the outer surface. The pad is ready for use after it is folded into a piece of thin gauze.

The figures show one example of the object of the invention.

Figure 1 shows a horizontal projection of the pad.

Figure 2 shows a graphic representation of the pad, whereby the gauze does not yet envelope the pad, and the upper layer of the absorbent portion is folded backwards.

Figure 3 shows a sectional representation along the line 3-3 in Figure 2 viewed in the direction of the arrows.

The pad in the shown examples comprises upper and lower layers (1 and 2) which consist of absorbent material. Any suitable material can be utilized for this purpose; however, it is preferred to utilize a matted fiber product that is particularly soft, light, exceptionally absorbent and can be manufactured in an economical manner. Such a material easily dissolves in water and can thus be flushed into the sewer line of a toilet without causing any clogging of the sewage pipes. The surface of the lower layer (2) of the pad is coated with a highly absorbent material. This coating is applied moist and preferably consists of potato flour, corn starch, tapioca, dextrine, gelatine or a similar material to which approximately 1% of alum is added. This coating is applied in any suitable adhesive manner, for example, by sprinkling. The coated surface (3) does not protrude over the lateral edges of the layer (2), and the lateral borders (4) of said layer remain uncoated.

Both layers (1,2) of the pad are placed on top of each other with the applied coating located in the center, and the adjacent surfaces of the individual layers adhere after the drying process in order to form a coherent central portion.

The central layer (3) connects the entire pad together after the starch or similar substance has dried, and provides the same with a homogeneous stability. The central layer has the tendency to absorb the concerned fluid and to laterally distribute the same within the interior, all of which is more beneficial than absorbing the fluid within the vicinity of the location of contact through the entire thickness of the pad. The outer surface of the layer (1) is subsequently sprayed or treated with a water-repellent oil such as rapeseed oil to locally limit the absorption ability of the upper layer. The surface of the pad saturated with oil is indicated by the reference numeral (5) in Figure 3. The female sanitary napkin is finished after the pad is folded into a piece of gauze (6). The gauze simultaneously forms the conventional protruding ends (7 and 8) required to tie or otherwise attach the pad.

Claims

1. Absorbent pad, characterized in that a main portion made from absorbent, easily dissolvable, matted cellular fibers encloses a central portion which has an even higher absorption ability than said main portion and consists of a plant paste or powder, so that the fluid is mainly absorbed into the interior of the pad.

2. Absorbent pad according to Claim 1, characterized in that the outer surfaces of the main portion are treated with a material that makes these surfaces fluid-repellent, but permeable.

3. Absorbent pad according to Claim 1, characterized in that the central portion preferably consists of potato flour.

4. Absorbent pad according to Claims 1 and 2, characterized in that rapeseed oil is utilized as the fluid-repellent material.

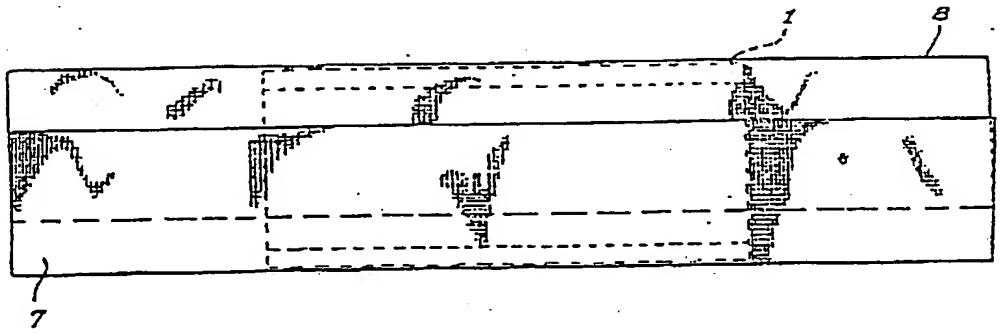


Figure 1.

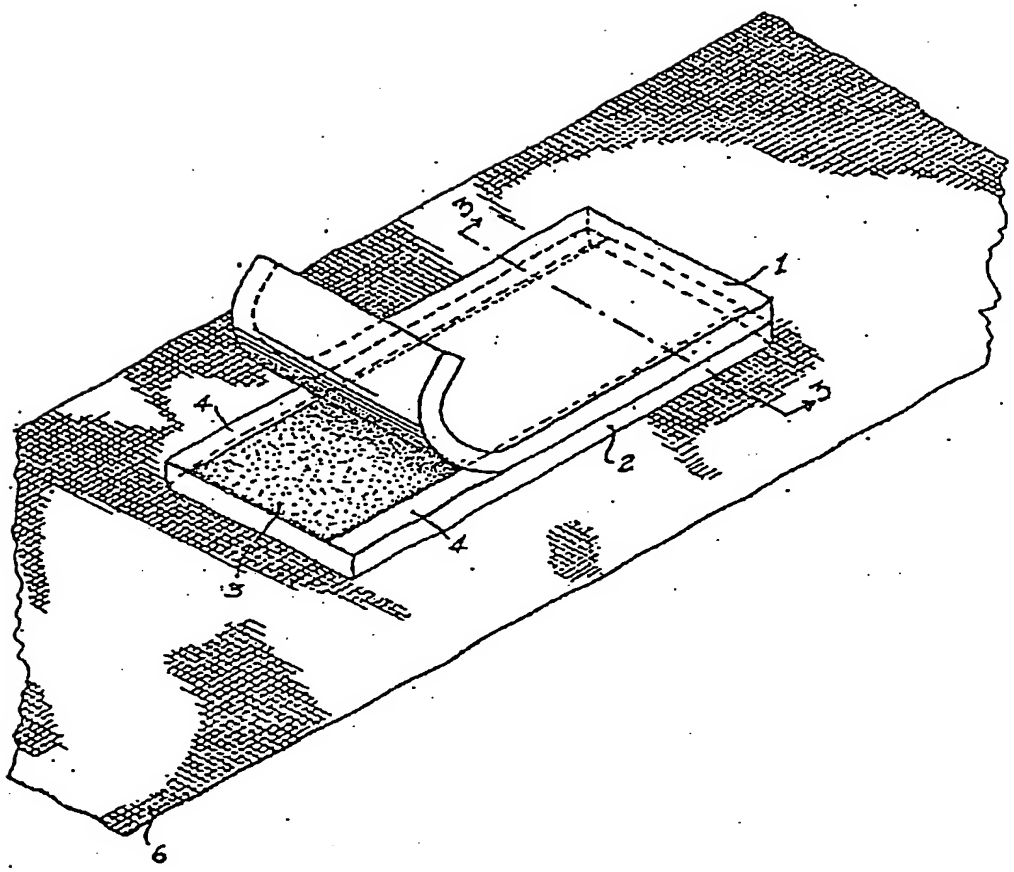


Figure 2.

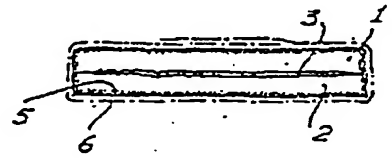


Figure 3.